

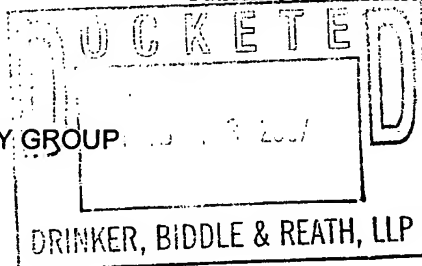


UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
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U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/580,748	Patrick Gerard Johnston	36290-0415-00-US

23973
 DRINKER BIDDLE & REATH
 ATTN: INTELLECTUAL PROPERTY GROUP
 ONE LOGAN SQUARE
 18TH AND CHERRY STREETS
 PHILADELPHIA, PA 19103-6996



INTERNATIONAL APPLICATION NO.	
PCT/GB04/05006	
I.A. FILING DATE	PRIORITY DATE
11/26/2004	11/26/2003

CONFIRMATION NO. 1280
 371 FORMALITIES LETTER



OC000000022357028

Date Mailed: 02/09/2007

NOTIFICATION TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant is given **TWO MONTHS FROM THE DATE OF THIS NOTICE** within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (571) 272-0951
- For Patentin Software Program Help, call Patent EBC at 1-866-217-9197 or directly at 703-305-3028 / 703-308-6845 between the hours of 6 a.m. and 12 midnight, Monday through Friday, EST.
- Send e-mail correspondence for Patentin Software Program Help @ ebc@uspto.gov

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

MAMIE P PERSON

Telephone: (703) 308-9140 EXT 227

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/580,748	PCT/GB04/05006	36290-0415-00-US

FORM PCT/DO/EO/922 (371 Formalities Notice)



UNITED STATES PATENT AND TRADEMARK OFFICE

227012

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
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U.S. APPLICATION NUMBER NO. 10/580,748	FIRST NAMED APPLICANT Patrick Gerard Johnston	ATTY. DOCKET NO. 36290-0415-00-US
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INTERNATIONAL APPLICATION NO. PCT/GB04/05006

I.A. FILING DATE 11/26/2004	PRIORITY DATE 11/26/2003
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23973
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 ATTN: INTELLECTUAL PROPERTY GROUP
 ONE LOGAN SQUARE
 18TH AND CHERRY STREETS
 PHILADELPHIA, PA 19103-6996

MAR 14 2007

CONFIRMATION NO. 1280

371 FORMALITIES LETTER



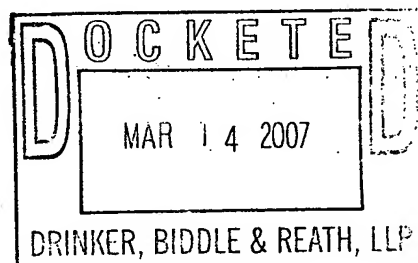
OC000000022797007

Date Mailed: 03/08/2007

NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495)

- Indication of Small Entity Status
- Priority Document
- Copy of the International Application filed on 05/26/2006
- Copy of the International Search Report filed on 05/26/2006
- Preliminary Amendments filed on 05/26/2006
- Information Disclosure Statements filed on 05/26/2006
- Biochemical Sequence Diskette filed on 07/24/2006
- Oath or Declaration filed on 08/11/2006
- Biochemical Sequence Listing filed on 05/26/2006
- Request for Immediate Examination filed on 05/26/2006
- U.S. Basic National Fees filed on 05/26/2006
- Priority Documents filed on 05/26/2006
- Specification filed on 05/26/2006
- Claims filed on 05/26/2006
- Abstracts filed on 05/26/2006
- Drawings filed on 05/26/2006
- Paper nucleotide sequence listings filed on 05/26/2006



Applicant's response filed 07/24/2006 is hereby acknowledged. The following requirements set forth in the NOTIFICATION of MISSING REQUIREMENTS mailed 02/09/2007 have not been completed.

- A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked-up "Raw Sequence Listing." Applicant must provide a substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content of the sequence listing information recorded in computer readable form is identical to the written (on paper or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (571) 272-0951
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MAMIE P PERSON

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PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/580,748	PCT/GB04/05006	36290-0415-00-US

STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/580,748
Source: TFBP
Date Processed by STIC: 1/19/07

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.4.0 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05): U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/10/06

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER:

10/580,748

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 **Wrapped Nucleics
Wrapped Aminos** The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 **Invalid Line Length** The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 **Misaligned Amino
Numbering** The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 **Non-ASCII** The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 **Variable Length** Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 **PatentIn 2.0
"bug"** A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 **Skipped Sequences
(OLD RULES)** Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 **Skipped Sequences
(NEW RULES)** Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
<210> sequence id number
<400> sequence id number
000
- 9 **Use of n's or Xaa's
(NEW RULES)** Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 **Invalid <213>
Response** Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 **Use of <220>** ~~Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses~~
~~Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.~~
~~(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)~~
- 12 **PatentIn 2.0
"bug"** Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 **Misuse of n/Xaa** "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid



IFWP

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/580,748

DATE: 01/19/2007

TIME: 09:36:42

Input Set : A:\SEQListing.txt

Output Set: N:\CRF4\01192007\J580748.raw

3 <110> APPLICANT: The Queen's University of Belfast
 4 Johnston, Patrick G
 5 Longley, Daniel
 7 <120> TITLE OF INVENTION: Cancer Treatment
 9 <130> FILE REFERENCE: 36290-0415-00-US
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/580,748
 C--> 12 <141> CURRENT FILING DATE: 2006-05-26
 14 <150> PRIOR APPLICATION NUMBER: GB0327499.0
 15 <151> PRIOR FILING DATE: 2003-11-26
 17 <150> PRIOR APPLICATION NUMBER: GB0327493.3
 18 <151> PRIOR FILING DATE: 2003-11-26
 20 <160> NUMBER OF SEQ ID NOS: 2
 22 <170> SOFTWARE: PatentIn version 3.3
 24 <210> SEQ ID NO: 1
 25 <211> LENGTH: 21
 26 <212> TYPE: DNA
 27 <213> ORGANISM: Artificial
 29 <220> FEATURE:
 30 <223> OTHER INFORMATION: Artificial Sequence
 32 <400> SEQUENCE: 1
 33 aagcagtcgtg ttcaaggagc a
 36 <210> SEQ ID NO: 2
 37 <211> LENGTH: 21
 38 <212> TYPE: DNA
 39 <213> ORGANISM: Artificial
 41 <220> FEATURE:
 42 <223> OTHER INFORMATION: Artificial Sequence
 44 <400> SEQUENCE: 2
 45 aaggaacagc ttggcgctca a

Not a Family
 Corrected Discl. Needed
 (P.5.1)

PLS explain source of
 genetic material.

Invalid
 Response

PLS explain
 source of genetic material.

Invalid
 Response

See item # 11 on error
 Summary sheet.

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/580,748

DATE: 01/19/2007
TIME: 09:36:43

Input Set : A:\SEQListing.txt
Output Set: N:\CRF4\01192007\J580748.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/580,748

DATE: 01/19/2007
TIME: 09:36:43

Input Set : A:\SEQListing.txt
Output Set: N:\CRF4\01192007\J580748.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application Number
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date